

Enabling efficient electronic collaboration for LIGO

Scott Koranda

LIGO and University of Wisconsin-Milwaukee

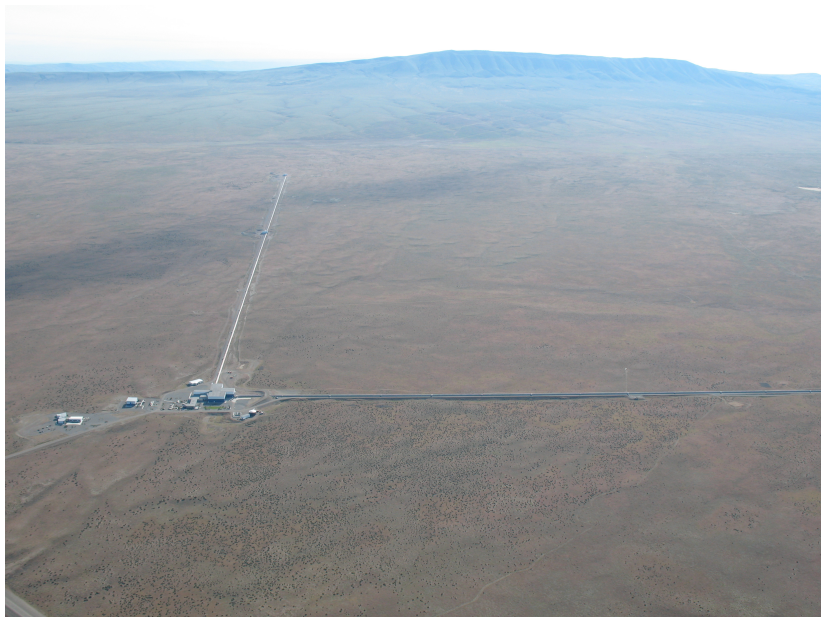
October 4, 2012
LIGO-G1201063-v1



LIGO Science Mission

LIGO, the Laser Interferometer Gravitational-wave Observatory, seeks to detect gravitational waves – ripples in the fabric of spacetime. First predicted by Einstein in his theory of general relativity, gravitational waves are produced by exotic events involving black holes, neutron stars and objects perhaps not yet discovered.

LIGO Hanford, WA



LIGO Livingston, LA



LIGO Scientific Collaboration

The LIGO Scientific Collaboration (LSC) is a self-governing collaboration seeking to detect gravitational waves, use them to explore the fundamental physics of gravity, and develop gravitational wave observations as a tool of astronomical discovery. The LIGO Scientific Collaboration was founded in 1997 and currently has more than 1000 members from 70 institutions worldwide.

External Collaborators?

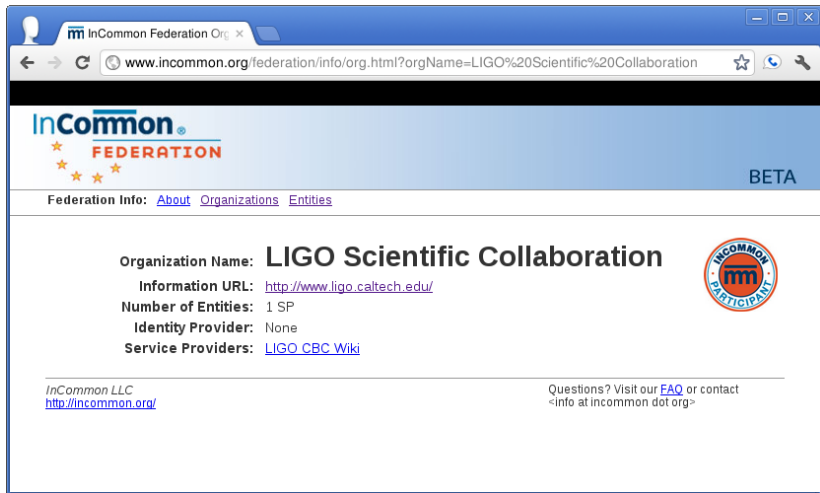
Hi,

Is it possible to get a ligo.org account for Fermi GBM scientists Pete Jenke and Valerie Connaughton? They are working with us on a LIGO-GBM coincidence analysis covered by MOU LIGO-M1000105-v1. I would like for them to be able to view and edit the project Wiki page,

<https://www.lsc-group.phys.uwm.edu/ligovirgo/cbcnote/NASAFollowUp>

Thanks,
Lindy

Identity Federation



The screenshot shows a web browser window with the following content:

- Browser tab: InCommon Federation Org
- Address bar: www.incommon.org/federation/info/org.html?orgName=LIGO%20Scientific%20Collaboration
- Header: InCommon FEDERATION logo with five stars and a "BETA" label.
- Navigation: Federation Info: [About](#) [Organizations](#) [Entities](#)
- Main Content:
 - Organization Name: **LIGO Scientific Collaboration**
 - Information URL: <http://www.ligo.caltech.edu/>
 - Number of Entities: 1 SP
 - Identity Provider: None
 - Service Providers: [LIGO CBC Wiki](#)
- Footer:
 - Left: InCommon LLC <http://incommon.org/>
 - Right: Questions? Visit our [FAQ](#) or contact <info at incommon dot org>

Identity Federation

DiscoveryService - Comp...

https://www.lsc-group.phys.uwm.edu/ligovirgo/cbcnote/DiscoveryService?entityID=https%3A%2F%2F...



LVC Portal GEO LIGO LSC VIRGO Help

Search [Titles] [Text]

[Refresh my LIGO group memberships](#)

Choose how to login

Use a suggested selection:

LIGO LIGO Guest

Or select your organization from the list below

Please select your organization... [Continue]

Please select your organization... Help

- LIGO
- LIGO Guest
- Massachusetts Institute of Technology
- Penn State
- University of Wisconsin-Milwaukee

Navigation

- [InspiralAnalysisGlossary](#)
- [RecentChanges](#)
- [FindPage](#)
- [HelpContents](#)
- DiscoveryService**

Page

- Immutable Page**
- [Info](#)
- [Attachments](#)
- More Actions: [v]

User

- [Login](#)

[MainMoin Powered](#)
[Python Powered](#)
[GPL licensed](#)
[Valid HTML 4.01](#)

None: DiscoveryService (last edited 2012-01-24 02:08:16 by [ScottKoranda](#))

Identity Federation

The screenshot shows a web browser window with the address bar displaying `https://idp.mit.edu/idp/Authn/MIT`. The page title is "Touchstone@MIT". The main heading reads "Welcome, please identify yourself to access MIT services." There are three authentication options:

- Have an MIT certificate?**
 - Button: **Use Certificate - Go**
 - Checkbox: Always login with this
 - Text: [Certificates](#) are your key to secure web services at MIT, (such as Benefits, Request Tracker, SAPweb, and WebSIS) and the preferred way to access MIT servers.
- No certificate? Use Kerberos username**
 - Username: @mit.edu
 - Password: **Login**
 - Text: If you don't have a certificate installed on this machine, you may login using your MIT username (the 8 characters before your @mit.edu email address) and your [Kerberos password](#).
- Have Kerberos tickets?**
 - Button: **Use existing tickets - Go**
 - Checkbox: Always login with this
 - Text: Using your Kerberos tickets to authenticate to MIT Touchstone requires correct [browser configuration](#). This option is useful for Athena and WIN.MIT.EDU users.

Identity Federation

NASAFollowUp - Compact

https://www.lsc-group.phys.uwm.edu/ligovirgo/cbcnote/NASAFollowUp

LVC Portal GEO LIGO LSC VIRGO Help

welcome: [ScottKoranda](#) | [settings](#)

[Refresh my LIGO group memberships](#)

[Wiki_Home](#) > [NASAFollowUp](#)

Quick Links

- [inspiralanalysisglossary](#)
- [recentchanges](#)
- [findpage](#)
- [helpcontents](#)
- [wiki home](#)

Search Wiki

Search

Page Tools

- [edit \(text\)](#)
- [page history](#)
- [email me changes](#)
- [add to quicklinks](#)
- [upload & manage files](#)

[\[more options \]](#)

NASA EM FollowUp of CBC GW Candidates

Summary

This analysis uses NASA high-energy photon data to search for EM counterparts to GW candidate events found by the CBC ihope analysis + Bayesian followup (inspnest). The processing is done completely offline, using archival (survey) data from the Fermi GBM and RXTE ASM instruments. The search targets weak (unreported) prompt gamma-ray counterparts, and x-ray afterglows to NS/NS and NS/BH mergers.

Success! (?)

This is fantastic!

Federation enables more science!

Success? (!)

This is a tragedy!

Federation creates new problems!

Details, Details, Details

- ▶ Not all MIT people should be authorized
- ▶ Use the wiki access control
- ▶ Wiki ACL consumes groups and names
- ▶ No source of “federated” groups...
- ▶ So what name should go into ACL?

Details, Details, Details

MIT Identity Provider asserts eduPersonPrincipalName

- ▶ eduPersonPrincipalName: `jhsmith@mit.edu`
- ▶ ePPN is the “correct” attribute to use *for this app*
- ▶ Wiki ACL needs to have user’s ePPN added for authorization

Problem is that only IdM administrators understand these details.

Problem

Users do not know what their ePPN is

Scientists should not have to email administrator for wiki access

Lindy knows John and wants to collaborate with him. A few mouse clicks is all it should take

Need to get IdM administrators and architects out of the way

The screenshot shows a web browser window with the following elements:

- Browser Tab:** COmanage Registry: COF x
- Address Bar:** https://demo.co.internet2.edu/registry/co_people/index/co:5
- Navigation:** News | Support | Directory | Help
- User:** Scott Koranda (with a notification icon) | Logout
- Menu:** Organizations ▾ | Platform ▾ | My Account ▾
- Logo:** COmanage™
- Section Header:** LIGO Swift Collaboration People
- Buttons:** Invite (+)
- Table Headers:** Name | Status | Roles | Actions
- Footer:** Powered by COmanage™

COmanage elevator pitch

COmanage Registry combines group management with configurable and flexible onboarding and offboarding workflows to support the quick and easy spin up of collaborative organizations (COs) focusing on a common task or goal.

Get involved!

- ▶ Looking for more projects to get involved
- ▶ Provide use cases, requirements, ...
- ▶ Development opportunities (hint, hint...)
- ▶ LIGO especially interested in astronomy projects

Enabling Efficient Collaboration

Federated identity does enable efficient collaboration

Consuming federated identity is just a start

Collaboration management platforms, tools, and services necessary to realize full potential of federated identity and enable efficient collaboration